

TSW

**PATENT APPLICATION**

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**



By re application of

Hirofumi FUJIOKA, et al.

Appln. No.: 10/609,476

Confirmation No.: 2217

Filed: July 01, 2003

For: METHOD FOR MANUFACTURING SEMICONDUCTOR DEVICE

Docket No: Q76291

Allowed: January 28, 2005

Group Art Unit: 2813

Examiner: Stephen W. SMOOT

**SUBMISSION OF ART**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

For the possible benefit of anyone subsequently evaluating the scope and/or validity of the above-identified patent, it is requested that the documents that are listed below (copies enclosed) be placed in the U.S. Patent and Trademark Office's file wrapper of the above-identified U.S. patent:

1. Japanese Unexamined Patent Application Publication No. H07-106322, published April 21, 1995.
2. Japanese Laid Open Patent Application Publication No. 2002-252286, published September 6, 2002.
3. Korean Laid-Open Patent Application Publication No. 2001-0065670, published July 11, 2001.

Above-listed documents 1 and 2 were recently cited in a Japanese Office Action dated June 21, 2005, a copy of which is enclosed along with an English translation of the pertinent portions thereof which cites these documents. Additionally, above-listed document 3 was

SUBMISSION OF ART  
U.S. Appln. No.: 10/609,476

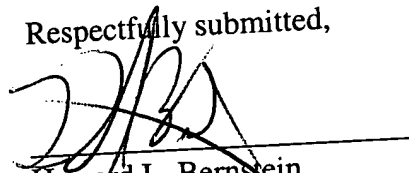
Atty. Docket No.: Q76291.

recently cited in a Korean Office Action dated June 2, 2005, a copy of which is enclosed along with an English translation of the pertinent portions thereof which cites this document.

The undersigned has not reviewed the teachings of the above-listed document in detail and thus makes no representations concerning the relevancy or materiality of the above-listed document.

This is not an Information Disclosure Statement and no response from the U.S. Patent and Trademark Office is believed to be necessary, nor are any fees believed to be due.

Respectfully submitted,



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WASHINGTON OFFICE

**23373**

CUSTOMER NUMBER

Date: July 26, 2005

**Q76291**

- Claims 1 through 12
  - Cited Literature 2
  - Remarks
- See especially (0004) and (0008).

Furthermore, Cited Literature ~~1~~ and 2 describe forming a tantalum oxide thin film at 480°C or 450°C using pentaethoxy tantalum. There is no remarkable difficulty in making the film forming temperature 450°C in the invention described in Cited Literature 3.

<Regarding Reason 3>

- Claims 1 through 12
- Cited Literature 4
- Remarks

Prior application specification 4 describes a method of forming a tantalum oxide film by atomic layer deposition at a temperature of 400°C using PET as a tantalum precursor and O<sub>3</sub> as an oxygen source (see especially (0026)).

List of Cited Literature

- ~~1. Japanese Unexamined Patent Application Publication 2000-340559 filed earlier in the USPTO~~
2. Japanese Unexamined Patent Application Publication H7-106322
- ~~3. Japanese Unexamined Patent Application Publication 2002-164345 filed earlier~~
4. Japanese Patent Application 2001-400661 (Japanese Unexamined Patent Application Publication 2002-252286)